

**UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

PRINCETON DIGITAL IMAGE CORPORATION,

Plaintiff,

v.

KONAMI DIGITAL ENTERTAINMENT INC,  
HARMONIX MUSIC SYSTEMS, INC. and  
ELECTRONIC ARTS, INC.,

Defendants.

Case No.: 12-1461 (LPS)

JURY TRIAL DEMANDED

**PLAINTIFF PRINCETON DIGITAL IMAGE CORP'S OPENING MARKMAN  
BRIEF ON LIMITED EARLY CLAIM CONSTRUCTION**

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## **I. STATEMENT OF NATURE AND STAGE OF THE PROCEEDING**

In this patent infringement action, plaintiff Princeton Digital Image Corporation (“PDIC”) seeks damages for defendants’ infringement of US Patent No. 5,513,129, entitled “Method and System for Controlling Computer-Generated Virtual Environment in Response to Audio Signals.” (Declaration, Ex. A, “the ‘129 patent”) At the Rule 16 conference on August 16, 2013, the parties advised the Court that an early, limited claim construction decision with respect to only the “virtual reality” terms of the patent might assist in expeditiously resolving the matter. The Court thus entered a scheduling order on August 23, 2013, (D.I. 34) requiring such early limited claim construction briefing.

## **II. SUMMARY OF ARGUMENT**

PDIC’s definitions of the virtual reality terms come directly from the patent in suit – which explicitly and clearly states a definition for those terms. Defendants have, however, proposed definitions which add various qualifiers to the explicit definition set forth in the ‘129 patent - qualifiers which: 1) appear nowhere in either the file history or the ‘129 patent, and 2) which directly conflict with the ‘129 patent’s explicit definition of those terms. Accordingly, the Court should reject defendants’ attempts to improperly limit the claims, and adopt PDIC’s definitions in their entirety.

## **III. STATEMENT OF FACTS**

The ‘129 patent relates generally to, *inter alia*, a virtual reality (“VR”) computer system that can be controlled and/or produced from music signals or from control signals previously derived from music signals. Many, but not all, of the claims, call for a “virtual environment” or a “virtual reality computer system.” (Declaration, Ex. A, e.g.; claims 1, 16, 21). The parties have exchanged proposed claim constructions for the virtual reality terms, which are set forth in the claim construction table below:

**Claim Construction Table**

<b>Claim Term</b>	<b>PDIC Proposed Construction</b>	<b>Defendants' Proposed Construction</b>
<b>Virtual Environment</b>	A computer-simulated environment (intended to be immersive) which includes a graphic display (from a user's first person perspective, in a form intended to be immersive to the user), and optionally also sounds which simulate environmental sounds.	A computer-simulated environment intended to be immersive by surrounding the user, which includes an immersive graphic display shown from the user's first-person perspective and, if sound is used, sounds that simulate environmental sounds.
<b>Virtual Reality Computer System</b>	A computer system programmed with software, and including peripheral devices, for producing a virtual environment.	A computer system, excluding a video game system, programmed with software, and including peripheral devices, for producing a virtual environment.

**IV. ARGUMENT****A. The Law of Claim Construction**

Claim construction is generally an issue of law for the Court. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996). Only the claim language that is in dispute needs to be construed. *Vivid Techs. v. American Science & Eng'g.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

To determine the proper meaning of a claim term, a court must “consider the so-called intrinsic evidence, *i.e.*, the claims, the written description, and, if in evidence, the prosecution history.” *Digital Biometrics, Inc. v. Indentix, Inc.*, 149 F.3d 1335, 1344 (Fed. Cir. 1998). A court commits error if it uses extrinsic evidence, such as expert testimony, unless the intrinsic evidence is insufficient to construe the claim. *Bell & Howell*

*Document Mgmt. Prods. Co. v. Altek Sys.*, 132 F.3d 701, 705 (Fed. Cir. 1997); *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583-84 (Fed. Cir. 1996).

The terms used in the claims bear a heavy presumption that they mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art. *Vitronics Corp.*, 90 F.3d at 1582. (emphasis added), *citing*, *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002); *K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1362-63 (Fed. Cir. 1999); *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 989 (Fed. Cir. 1999).

The specification is the single best source for claim interpretation. *Phillips v. AWH*, 415 F.3d 1303 (Fed. Cir. 2005)(*en banc*). When the specification sets forth an explicit definition of a term, that definition governs. *Jack Guttman, Inc. v. Kopykake Enterprises, Inc.*, 302 F.3d 1352 (Fed. Cir. 2002).

#### B. PDIC's Constructions of the Virtual Reality Terms Should Be Adopted

It is, quite literally, difficult to conceive of a case in which the definitions of claim terms could be clearer than they are here. Right up front, the '129 patent states:

**The terms "virtual environment," "virtual world," and "virtual reality" are used interchangeably to describe a computer-simulated environment (intended to be immersive) which includes a graphic display (from a user's first person perspective, in a form intended to be immersive to the user), and optionally also sounds which simulate environmental sounds. The abbreviation "VR" will sometimes be used herein to denote "virtual reality," "virtual environment," or "virtual world". A computer system programmed with software, and including peripheral devices, for producing a virtual environment will sometimes be referred to herein as a VR system or VR processor.** (Bolding added, Ex. A, col. 1, lines 22-33)

PDIC's proposed claim constructions are identical to the bolded portions above. Defendants have added additional language that, among other things, mandates that the immersion is achieved "by surrounding the user" and that the computer system must not

be a video game system. (See Claim Construction Table above) Defendants' proposals find no support in the intrinsic record, and should be rejected.

With regard to the requirement that the virtual reality "surround" the user, it is unclear what defendants even mean by this. The '129 patent does not use the word "surround" anywhere, and the two dimensional display screen that the '129 patent discloses as the display certainly does not surround anyone in the typical sense that the word surround is used. (Declaration, Ex. A, lines 34-36).

Further, while three substantive responses were filed by the applicant in the patent office during prosecution, none of them appear to discuss or relate in any way to whether the virtual reality must "surround" the user. (Declaration, Exs. B, C, D). Finally, the primary reference used by the Examiner to initially reject the claims does not disclose anything that can reasonably be deemed to surround the user. (Declaration, Ex. C, responding to rejection of virtual reality claims based upon Tuber, U.S. Patent No. 3,609,019, Declaration, Ex. E, patent to Tuber). Hence, the patent examiner certainly did not believe there was any limitation about surrounding the user.

PDIC will address in its responsive brief whatever assertions defendants make with regard to the construction of virtual environment, however, the additional requirements that defendants wish to import into the claims appear to have absolutely no support in the intrinsic record. Accordingly, the Court should reject defendants' construction in favor of the definition set forth in the '129 patent.

With respect to the definition of the term "Virtual Reality Computer System," defendants again disregard the explicit definition in the '129 patent, in favor of their own definition, which adds the language "excluding a video game system." While PDIC does

not know from where defendants imported this limitation, what is known is it directly conflicts with the '129 patent specification.

Specifically, the '129 patent states, in its "Summary of the Invention" section, that:

The use of prerecorded control tracks has several advantages and features, including the following:

...

(c) the medium for the control track need not be the same as that of the music. For example, the music may be recorded on a compact disk (CD) while the control track is recorded on a computer game cartridge or other medium;

(Declaration, Ex. A, col. 5, lines 34-50, emphasis supplied).

Moreover, the '129 patent states that "Fig. 1 is a diagram of a preferred embodiment of the inventive system..." and that "FIG. 2 is a diagram of a variation on the Fig. 1 embodiment." (Declaration, Ex. A, col. 7, lines 10-20). The '129 patent later describes Fig. 2, an embodiment of the invention, in more detail:

FIG. 2 shows a variation on the system of Fig. 1 in which a control track and a corresponding music signal are recorded on (and played back from) different media (one from source 1A; the other from source 1). For example, the control track can be recorded on, and played back from, a cartridge (1A) for a video game machine and the music can be recorded on, and played back from, a CD (1).

(Declaration, Ex. A, col. 8, lines 58-65, emphasis supplied).

Further, at col. 11, lines 65-67, the '129 patent discusses an embodiment in which the invention is integrated "into a cartridge for a video game machine with CD capability, for example."

In view of the '129 patent's disclosure, that in an embodiment of the invention, the control track used to control a virtual reality can be recorded on and played back from a video game cartridge or computer game cartridge, which, of course, is used to play a video game, defendants' assertion that video games are excluded from the scope of the



claims makes no sense. A construction that excludes disclosed embodiments is rarely the correct one. *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1305 (Fed.Cir.2007) (rejecting proposed claim interpretation that would exclude disclosed examples.); *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1369 (Fed.Cir.2003)<sup>1</sup>

The Court should reject defendants' attempts to improperly limit the claims.

## V. CONCLUSION

PDIC respectfully requests that the Court adopt PDIC's claim constructions with respect to the virtual reality limitations.

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<sup>1</sup> While PDIC has shown how defendants' interpretation excludes the very exemplary embodiments disclosed in the '129 patent specification, it bears emphasizing that PDIC does not bear the burden of showing that the specification shows examples of video games as the virtual reality. Instead, defendants must show that the video game embodiment, whether disclosed or not, was clearly disclaimed. As the Federal Circuit held in *Fuji Photo Film, Ltd. v. International Trade Commission*, 386 F.3d 1095, 1105:

The Commission's argument that "there is no suggestion in the '649 patent that steps 2 and 3 of claim 1 could be performed outside a darkroom" has it backwards; the proper question is whether the specification indicates that the second and third steps cannot be performed outside a darkroom, and thus that the claim must be interpreted more narrowly than its language appears to require. See *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed.Cir.2002) (an accused infringer cannot overcome the heavy presumption that claims should be given their ordinary meaning "simply by pointing to the preferred embodiment or other structures or steps disclosed in the specification"); *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed.Cir.2004) ("the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope").

*Fuji Photo Film Co., Ltd. v. Int'l Trade Comm'n*, 386 F.3d 1095, 1105 (Fed. Cir. 2004).

It is hard to fathom how defendants plan to show that the '129 disclosure demonstrates a "clear intention to limit the claim scope" to exclude video game embodiments.

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